AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 10, lines 9-29, with the following paragraph, marked-up to show changes made.

Figure 1 shows the result of the examination of the expressions of an HRF and a CYP1A1 in a eutopic endometrium tissue from an endometriosis patient as well as an endometriosis implant. ~~(A)~~The top portion shows an HRF mRNA level was measured by a northern blotting analysis. The blot was subjected to a re-probing using a human β actin probe to determine a total RNA level. A CYP1A1 mRNA level in a sample examined by the northern blotting was determined by a quantitative RT-PCR using a southern blotting analysis. In order to verify the quantification accuracy, cDNA samples at concentrations of a 5-fold difference (1x and 5x) were employed as PCR templates and examined in a similar layout. A β actin was used as an internal standard for the mRNA level. ~~(B)~~The bottom portion shows an image display for the HRF and CYP1A1 mRNA levels is shown similarly. An mRNA level was normalized for the β actin signal using a densitometry (MOLECULAR IMAGER, Nippon Bio-Rad). The sample 11-2A exhibits an HRF mRNA level, while the sample 10-2A exhibits a CYP1A1 mRNA level, which are designated as 10 for convenience. When a plural of samples were derived from a single individual, a mean value was calculated and indicated. An error bar represents a maximum level among the plural of the samples. 12-1, 7-1, 8-1 and 6B correspond to normal endometrial tissues, while IC designated with asterisk corresponds to a eutopic endometrium of an endometriosis patient.

Please replace the paragraph on page 11, lines 1-16, with the following paragraph, marked-up to show changes made.

Figure 2 shows the results of the examination of the HRF expressions in an endometriosis implant. (A) shows the results of the northern blotting analysis of the HRF expressions in a normal endometrium tissue, a eutopic endometrium tissue from an endometriosis patient and an endometriosis implant. The blot was subjected to a re-probing using a human β actin probe to determine a total RNA level. N, Eu and En on the column represent the normal endometrium tissue, the eutopic endometrium tissue from an endometriosis patient and the endometriosis implant, respectively. (B) shows a graph of the HRF mRNA levels measured by a northern blotting analysis of the samples examined in Figure 1 ~~Figure 1A~~ and Figure 2A. The HRF mRNA level was normalized for the β actin signal using a densitometry (MOLECULAR IMAGER, Nippon Bio-Rad). The mRNA level of the sample 6B is designated as 1 for convenience. When a plural of samples were derived from a single individual, a mean value was calculated and indicated. An error bar represents a maximum level among the plural of the samples.

Please replace the paragraph on page 28, lines 3-18, with the following paragraph, marked-up to show changes made.

The HRF expression pattern during an endometriosis was determined by a northern blotting analysis. As a result, a high level HRF expression was observed in an endometriosis implant tissue obtained from 3 out of 5 patients ~~(Figures 1A and 1B)~~(Figure 1). Since a part of a human cytochrome p450 gene superfamily (for example, CYP1A1, CYP1A2 and CYP1B1) are induced by dioxin, the induction of the CYP1A1 will be a primary target for a dioxin-dependent gene expression regulation. Accordingly, the relationship between exposure to dioxin and HRF expression was examined by investigating the CYP1A1 expression using an RT-PCR by a southern analysis (Trifa Y. et al., J. Biol. Chem. 1998, 273(7):3980-5; Oikawa K. et al., Gene 2000, 261(2):221-8). As a result, it was revealed that the CYP1A1 was not induced in all cases exhibiting higher HRF expressions ~~(Figure 1A and 1B)~~(Figure 1). Accordingly, the HRF was proven to be induced in the endometriosis implant regardless of the TCDD exposure, in spite that it was possible that the HRF expression was induced by the TCDD in some cases.